

Michael WATERS

Application No. 10/571,796, filed February 22, 2007

SUPPLEMENTAL PRELIMINARY AMENDMENT dated August 1, 2007

### AMENDMENTS TO THE SPECIFICATION

On page 1 of the Specification, after the title, please add the following new section:

#### **Cross-Reference to Related Applications**

This application is a 35 U.S.C. 371 National Stage of International Application PCT/US02/35665, filed November 7, 2002, which is a continuation-in-part of Application Number 10/145,595, filed May 14, 2002, now U.S. Patent No. 6,612,696 B2, which is a continuation-in-part of Application Number 10/006,919, filed November 7, 2001, now U.S. Patent No. 6,612,695 B2.

On page 11 of the Specification, please replace the paragraph beginning on line 10 with the following amended paragraph:

By canting the light beams 136 and 138 inwardly, little light is wasted on areas that are outside the effective field of view, generally designated 26, of the glasses 5. Further, the conical overlap area 140 that receives double the amount of light increases in size with increasing distances from the lenses 12. By contrast, the peripheral areas ~~[[30]]~~ 31 and ~~[[32]]~~ 33 on either side of the double-lit overlap area 140 become smaller with increasing distance from the lenses 12. Since light dissipation can become an issue as distances increase from the light source, the increasing size of the double-lit area 22 in comparison to the decreasing size of the single-lit areas ~~[[30]]~~ 31 and ~~[[32]]~~ 33 provides a significant advantage in having a very well-lit reading area with an efficient use of the light generated by the LEDs 108 herein. Further, the fixed canting of the beams 136 and 138 allows a user to put on the glasses 5 and know that they will

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be able to begin reading even in dimly-lit areas by simply turning on the lights 16 without requiring that they be adjusted for focusing them on the material to be read.

On page 12 of the Specification, please replace the paragraph beginning on line 12 with the following amended paragraph:

In the preferred and illustrated form, the eyeglasses 5 including temple arms 104 are constructed such that with the arms 104 opened, their forward end portions 104a will extend substantially normal to the general plane of the eyeglass lenses 12 and to any frame portions that may be included thereabout. Further, the housings 109 are constructed so that when attached flush to the arm forward end portion 104a as shown in Fig. 3, the housing axis 42 will extend parallel to the forward end portion 104a and straight forwardly from the glasses 5. With the preferred solid state material for the LEDs 108 as described hereinafter, they will generate a narrow light beam cone 136, 138 of twenty degrees. For this narrow cone 136, 138, the oblique inward cant angle 46 (Fig. 8A) is preferably approximately fifteen degrees so that the point 48 of intersection where the overlap lighted area 22 begins is centrally disposed between the lenses 12 and spaced forwardly therefrom approximately at the start of the reading distance range 24. This inward canting of the light beam cones 136 and 138 also minimizes the amount of light that is projected to lateral areas outside the field of view 26 forwardly of the glasses 5.

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On page 13 of the Specification, please replace the paragraph beginning on line 28 with the following amended paragraph:

Referring to Fig. 5, an exploded perspective view of the light module 105 is shown. The light module 105 comprises a housing 109 (Fig. 11) that is preferably constructed of a lightweight material, such as plastic, to provide the greatest amount of comfort to the wearer, while still being a cost-effective product. The housing 109 includes a first cover member 106 and a second cover member 107. The second cover member 107 is formed with a main flat wall 107a from which upstanding walls 107b extend from the periphery thereof to form an interior space 107c in which the switch 114, the batteries 116 and the LED 108 are disposed. The fastening devices 124, which may be self tapping screws among others, are used to fasten the first cover member 106 as a lid onto the second cover member 107.

On page 14 of the Specification, please replace the paragraph beginning on line 20 with the following amended paragraph:

The LED 108 includes anode 111 and cathode 115 leads that are used to energize the LED 108. In addition, the anode 111 and cathode 115 leads are physically configured to also enable the LED 108 to be securely held in position within the light module 105. The cathode 115 lead, which is generally the shorter of the two leads, is trimmed further to a size suitable for engaging an aperture 113 in a lead guide assembly or box shaped member 130. The trimmed cathode 115 lead is bent into a curved hook configuration to behave as a resilient spring clip when mounted into the light module 105; and the anode lead is left in its original form and engages a second

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aperture in the box shaped member 130, which enables the anode 111 lead to extend into the open portion of the second cover member 107, as further discussed below.

On page 14 of the Specification, please replace the paragraph beginning on line 31 with the following amended paragraph:

The second cover member 107 includes a LED positioning member or rib 38 having curved surface 30 formed thereon for cooperating with surface 32 to capture the LED dome lens 34, as previously described. A lead guide assembly 130 is disposed within cover member 107. The guide assembly 130 channels or guides the anode 111 lead and the cathode 115 lead into their respective appropriate positions for conducting and switching functions. The guide assembly 130 includes an extending sidewall 131 and an extending support structure 132. The support structure 132 includes ~~first 133 and second 134 indents~~ and a block 135 oriented between the ~~first 133 and second 134 indents~~ aperture 113 and indent 134. When the LED 108 is placed into position in the guide assembly 130, the anode 111 lead is placed into the channel between the extending sidewall 131 and extending support structure 132. A large portion of the anode 111 lead extends beyond the sidewall 131 and into the cover member 107 opening. The cathode 115 lead, which is in a bent hook configuration is placed into the support structure 132 such that the portion of the cathode that is connected to the LED 108 is situated in the ~~second 134 indent~~ 134 and the hooked portion engages the ~~first 133 indent~~ aperture 113. The block 135 forces part of the cathode 115 lead to extend beyond the support structure 132 to enable contact between the batteries 116 and the cathode 115 via the switch 114.

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On page 16 of the Specification, please replace the paragraph beginning on line 17 with the following amended paragraph:

When assembled, the batteries 116 make contact with the anode or elongated portion 111 of the LED 108. The batteries 116 are stacked together such that the negative terminal of the first battery is an electrical contact with the positive terminal of the second battery. The positive terminal of the first battery 116 is then placed in electrical contact with the elongated portion 111 of the LED ~~[[18]]~~ 108. The switch 114 which is constructed of an electrically conductive lightweight metal strip rests solely on the negative terminal of the second battery when the light module is not producing light, resulting in an open circuit. When the switch 114 is placed in its "on" position, an electrical connection is created between the negative terminal of the battery 116 and the depending hooked portion 115 of the LED 108. Thus the circuit from the positive terminal of the battery 116 to the LED 108 is completed using the switch 114, and the LED 108 illuminates. The projecting portion 110 may be integrally formed as part of the metal strip or may be a plastic or metal projection that is fastened at an appropriate position in the body of the switch 114. The body of the switch 114 is constructed such that the metal strip includes one or more inclines formed by bends in the metal strip of the switch. The inclines are sized to cause the switch 114 to fit relatively tightly between the battery and the housing much like a spring, thereby enabling the switch to maintain its on or off position into which it has been placed.

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On page 17 of the Specification, please replace the paragraph beginning on line 7 with the following amended paragraph:

Referring to Figs. 8 and 8A, the light module is shown in its assembled form. The LED positioning member 40 of the cover member 106 presses against the body of the LED 108 and pushed the LED 108 into a canted position within the housing ~~[[105]]~~ 109. A particular advantage in such a configuration is that the LED is able to project light at a precise pre-determined angle. Referring in particular to Fig. 8A, it can be clearly seen that the base 108a of the LED 108 helps to hold the LED 108 in place within the housing ~~[[105]]~~ 109. Furthermore, it also clearly can be seen that the LED positioning member 40 is angled to a degree such that the top of the LED 108 is pushed against the second cover member 107 and particularly the positioning rib 38 thereof.

On page 17 of the Specification, please replace the paragraph beginning on line 18 with the following amended paragraph:

Turning now to Fig. 9, the eyeglasses 101 having the light modules 105 mounted thereon are shown in operation. The canted positioning of the LEDs 108 (Fig. 8A) in each of the light modules 105 cooperate to create an overlapping zone 140 of their respective cones of light 136, 138 in the desired reading range. In particular, because of the twenty degree ~~viewing-angle~~ cones of light 136, 138 of the LEDs 108, and their precise cant within the housing ~~[[107]]~~ 109, the overlap area 140 occurs within a range of distances that is ideally suited for reading after the use of corrective lenses in the eyeglasses for those in need of vision correction. As a result, the incidence of stray light is reduced and the amount of light illuminating the reading

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surface is maximized, as previously described. The eyeglasses themselves may be of any configuration. For example, the lenses of the eyeglasses may or may not have frames surrounding the exterior edges of the lenses. Furthermore, the eyeglasses may have bridges for interconnecting the inner portions of the lenses ~~[[of]]~~ for interconnecting the inner portions of the lens frames, depending on whether the eyeglasses have frames.

On page 18 of the Specification, please replace the paragraph beginning on line 3 with the following amended paragraph:

Referring to Figs. 10 and 11, the light module 105 is shown with a pair of spring clips ~~[[135]]~~ 234 attached to the second cover member 107. The spring clips ~~[[135]]~~ 234 may be manufactured of any strong resilient materials such as a high impact ABS plastic or metal, such as stainless steel. The spring clips ~~[[135]]~~ 234 may be formed having slight ridges ~~[[135]]~~ 235 to more securely hold the light modules 105 in place. The spring clips ~~[[135]]~~ 234 enable the light module 105 to be retrofitted or removably attached to any eyeglasses. Therefore, the present invention is not limited to eyeglasses having premounted light modules that are more perfectly fixed to eyeglasses as by fasteners or the like requiring tools for their removal. Rather, any existing eyeglass frames maybe fitted with the light modules. Referring to Fig. 10, it can be seen that the spring clips ~~[[124]]~~ 234 are fastened onto the housing 109 using the same apertures ~~[[120]]~~ 122 and fastening devices 124 as described above. Therefore, a manufacturer of the light module obtains a cost benefit by using the same light module 105 platform, but easily configuring it in a number of different ways, depending on the type and configuration of the lighted eyeglasses.

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On page 19 of the Specification, please replace the paragraph beginning on line 17 with the following amended paragraph:

Lighted eyeglasses having the light module 105, mounted in the manner described above may, in certain instances, create glare that is perceivable by the wearer. As shown, stray or incident light rays 170 that are emitted by the LED 108 may project towards the lens 156 of the pair of eyeglasses 158. The rays 170 are then reflected or refracted by the lenses 156 into the eyes of the wearer. In contrast, the glare reducing light module 150 includes an integral projecting portion or blinder extension 154 for reducing potential glare that may be generated as a result of the light ~~[[160]]~~ 168 emitted by the LED 108 as it is reflected or refracted off the lenses 156 in the glasses 158. The light module 150 is comprised of a housing 162 that includes a first cover member 164 and a second cover member 166. The second cover member 166 includes the blinder extension 154, which is situated between the LED dome and the lens 156 when the light module is mounted to eyeglasses. The blinder extension 154 is configured such that it extends outwards in the direction of the LED 108 and is optimally sized such that the blinder extension 154 blocks the incident rays of light without distracting the wearer or interfering with the light 168 projected for illuminating a reading surface.